

REMARKS

The following remarks are exactly as submitted on March 16, 2009, except for a new penultimate paragraph at the bottom of page 9 addressing the obviousness-type double patenting rejection.

Claims 1-30 are in the case. Claims 2, 6, 8, and 10 are being amended to make certain formality corrections without changing the scope of these claims. Claim 31 has been added to present a dependent claim wherein the carboxyl-terminated polymer is a carboxyl-terminated polyethylene oxide. Support is found at paragraph 0018, line 5.

Claims 23-30 are withdrawn from consideration as being non-elected in response to the restriction requirement which remains traversed. The inventions as grouped are neither independent nor distinct, each from the other, for the reasons set forth in applicants' paper of Feb. 26, 2008, which are incorporated by reference. Both independence and distinctness are required for a proper restriction requirement. An article formed from a composition of Group I, as in claim 23, which is grouped separately, and a method of using the article, as in claim 29, are not separate inventions and would not even be classified differently from each other. The grounds set forth in the Office Action of Oct. 15, 2008 for making the restriction requirement final are not understood and reconsideration is requested because Groups III (claim 29) and IV (claim 30) can not be practiced without the invention of Group I. The Office Action says that the components of claim 1 recites independent and chemically distinct elastomeric matrices which do not necessarily overlap in scope as further evidenced by the method for providing different chemical effects as recited in claim 29. Perhaps the examiner intended an election of species requirement rather than a restriction requirement because the grounds provided do not support a restriction requirement as applicants understand the statute, rules, precedents, and instructions in the MPEP.

Claims 2 and 6, were rejected under 35 U.S.C. 112 as being indefinite regarding the ratios. The format for the ratios and the specification as being molar has been corrected.

Claims 10-12 were rejected under 35 U.S.C. 112 as being indefinite regarding the antecedent basis for copolymer, which has been corrected to “polymer.”

Claims 1-3, 6, 10-16, and 18-22 were rejected under 35 U.S.C. 102 as being anticipated by Chapin. The present invention in its broadest sense is a continuous release composition comprising an elastomeric matrix and at least one active agent which releases from the matrix into the environment substantially continuously over an extended period of time. The matrix is the reaction product of a carboxyl-terminated polymer with a polycarbodiimide.

Chapin, in sharp contrast, is directed to compositions wherein the matrix material is polyurethane made by reaction of a polyol with a polyisocyanate. Chapin does not disclose a polycarbodiimide and so Chapin clearly fails to anticipate claim 1.

A polycarbodiimide has completely different chemical characteristics from a polyisocyanate or a polyurethane. A polycarbodiimide is typically prepared by polymerizing a polyisocyanate itself, such as toluene diisocyanate or diphenyl methane diisocyanate. It is not prepared by reacting a polyisocyanate with a polyol or other active hydrogen; such reaction produces a polyurethane.

Torimae et al was cited in the body of this rejection for the proposition that the Chapin polyurethane is a polycarbodiimide “as defined by Torimae,” but Torimae does not teach a polycarbodiimide is the same as a polyurethane. If Torimae did define a polycarbodiimide that way, it would be absolutely incorrect.

Torimae discloses “an abrasive material which comprises abrasive grains and a polycarbodiimide and polyurethane resin as the binder for the abrasive grains and a method of preparation thereof are disclosed. The polycarbodiimide and polyurethane resin is prepared by reacting a polyisocyanate and a polyol in the presence of a [carbodiimidation] catalyst. The resin has a specified amount [preferably 1-3 gram equivalents per 1000 grams of resin] of carbodiimide bonding and urethane bonding.” Torimae mentions as “carbodiimidation catalysts” alkali metal salt of a monoalkyl phosphate, used to convert two isocyanate groups into one carbodiimide by eliminating a molecule of carbon dioxide. In sharp contrast the

reaction disclosed by Chapin to form the Chapin matrix is a polyurethane. Chapin does not use a carbodiimide catalyst and does not intend to make an abrasive material. At most, Torimae teaches that it is possible to have a resin comprising polydiimide and polyurethane, but Chapin's extended release matrix is polyurethane only. The matrix of the claimed invention, on the other hand, is not a combination of polydiimide and polyurethane, as in Torimae, but is the reaction product of a carboxyl-terminated polymer and a polycarbodiimide which results in an N-acyl urea moiety.

Since claim 1 is clearly not anticipated by Chapin, none of the claims dependent on claim 1 can be anticipated, including the claims withdrawn from consideration.

Claims 1-22 were rejected under 35 U.S.C. 103 as being unpatentable over Chapin in view of Riew and Hawley's Condensed Chemical Dictionary.

Riew is cited for "teaching increasing the strength and rigidity of synthetic resin products by using different functionally terminated elastomers such as copolymers of carboxyl-terminated isoprene and acrylonitrile and carboxyl-terminated polybutadiene (Ex. 6). Functionally terminated polyethers of polyethylene oxide, preferably carboxyl functional, are disclosed in col. 3, lines 8-9."

Riew disclosed "hard and strong epoxy resin products of high impact resistance * * * made from a di-epoxy compound, a smaller than equivalent proportion of chain extender which is preferably a bis-phenol, and about 5% (based on the amount of the di-epoxy compound) of a functionally terminated elastomer which is preferably a phenol terminated liquid copolymer of butadiene and acrylonitrile, together with a curing agent active at elevated temperatures." Riew does not teach or even remotely suggest any continuous release composition, nor an elastomeric matrix with an active agent which is released into the environment over a period of time, nor a carboxyl-terminated polymer, nor a polycarbodiimide. Riew could not be more irrelevant to the present invention. Riew does not cure the crucial deficiency of Chapin. No secondary reference is cited to lead one skilled in the art to substitute applicants' matrix, a "reaction product of a carboxyl-terminated polymer with a polycarbodiimide" for the polyurethane matrix of Chapin in a sustained release composition.

Hawley's Condensed Chemical Dictionary is cited for its definition of a carboxyl group as "a functional group which is typically used as a terminal group and is capable of assuming a negative charge, which makes the molecule to which it is attached water-soluble or hydrophilic." The Office Action stated that "in further view of *Hawley's*, one would have been motivated to adjust the levels of two chemically similar hydroxyl-terminated components in order to achieve the desired product. The Office Action was apparently referring to claim 9 which requires the major component as being at least 90% of the polymer by weight. *Hawley's* does not teach or suggest any particular reason why the major component should be at least 90% by weight. *Hawley's* was not cited to cure the deficiency in Chapin or Chapin in view of Riew regarding claim 1.

On page 10 of the Official Action, claims 1-7, 10-16, and 18-22 were rejected for obviousness-type double patenting over claims 1-4 and 8-10 of Chapin et al USPN 4,594,308. Chapin et al '308 is not assigned to the assignee of the present application, nor are there any inventors in common. According to MPEP sec. 804, a common assignee or inventors in common are required for an obviousness-type double patenting rejection. Reconsideration and withdrawal of this ground of rejection is requested.

For these reasons, reconsideration of the restriction requirement, the rejections under 35 U.S.C. 112, 102, and 103 are requested.

Respectfully submitted,

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